

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

Claim 1 (currently amended): A method of increasing the rate of an enzyme catalyzed nucleoside monophosphate transfer from a terminal-phosphate-labeled nucleoside polyphosphate to detect the activity of said enzyme or said terminal-phosphate-labeled nucleoside polyphosphate, said method comprising:

- a) conducting said enzyme catalyzed nucleoside monophosphate transfer from a terminal-phosphate-labeled nucleoside polyphosphate reaction in reaction buffer comprising a manganese salt, thereby increasing the rate of said reaction over the rate of said reaction in the absence of manganese;

wherein said enzyme is ~~selected from a template dependent-nucleic acid~~ DNA polymerase, a ligase, a telomerase or a primase  
further wherein said reaction is conducted in a template dependent manner.

Claims 2-3 (cancelled)

Claim 4 (currently amended): The method of claim 1, wherein the polymerase is selected from Phi 29 DNA polymerase, Klenow  $\text{exo}^-$ , ~~Sequenase~~ T7 DNA polymerase  $\text{exo}^-$ , *Taq* DNA polymerase, ~~Thermo Sequenase-I~~ Taq F667Y deletion 1-235 DNA polymerase, ~~Thermo Sequenase-II~~ Thermus thermophilus F667Y D18A DNA polymerase, ~~Thermo Sequenase-E681M~~ Taq F667Y D18A E681M DNA polymerase, *T. hypogea* (Thy B) DNA polymerase, *T. neapolitana* (Tne) DNA polymerase, *T. subterranea* (Tsu) DNA polymerase, *T. barossii* (Tba) DNA polymerase, *T. litoralis* (~~NEB Vent~~) DNA polymerase, *T. kodakaraensis* (~~Novagen~~) DNA polymerase, *P. furiosus* (~~Stratagene~~) DNA polymerase, *P. GB-D* (~~NEB Deep Vent~~) DNA polymerase, Human Pol beta, Tsp JS1, AMV-reverse transcriptase, MMLV- reverse transcriptase and HIV- reverse transcriptase.

Claim 5 (original): The method of claim 1, wherein the concentration of manganese salt is at least 0.01 mM.

Claim 6 (original): The method of claim 1, wherein the manganese salt concentration is between 0.01 to 50 mM.

Claim 7 (original): The method of claim 1, wherein the manganese salt concentration is between 0.1 to 10 mM.

Claim 8 (original): The method of claim 1, wherein an additional metal salt other than manganese, is also present with the terminal-phosphate labeled nucleoside polyphosphate.

Claim 9 (original): The method of claim 8, wherein said additional metal salt is a magnesium or a calcium salt.

Claim 10 (original): The method of claim 8, wherein said additional metal salt is present at a concentration of 0.01 mM to 50 mM.

Claim 11 (original): The method of claim 1, further comprising conducting said reaction in the presence of a metal ion buffer to modulate the concentration of free metal ion.

Claim 12 (original): The method according to claim 11, wherein said metal ion buffer is a dicarboxylic acid.

Claims 13-66 (cancelled)